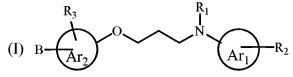
Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A compound having the structure of Formula I:



wherein

Ar_1 is ~~selected from the group consisting of a monocyclic heteroaromatic ring structure and a bicyclic heteroaromatic ring structure~~ pyrimidine;

Ar_2 is selected from the group consisting of a monocyclic, a bicyclic, and a tricyclic carbocyclic aryl ring structure

R_1 is selected from the group consisting of

alkyl, optionally substituted with a substituent selected from the group consisting of hydrogen, lower alkyl, optionally substituted carbocyclic or heterocyclic ring, halogen, perhaloalkyl, hydroxy, alkoxy, nitro, and amino;

a five-membered or six-membered heteroaryl ring or a six-membered aryl ring, optionally substituted with one or more substituents selected from the group consisting of optionally substituted C_1-C_8 straight-chain, branched, or cyclic saturated or unsaturated alkyl; an alkoxy; cyano; nitro; an amino; an amido; perhaloalkyl; and halogen;

R_2 is selected from the group consisting of

hydrogen;

alkyl, optionally substituted with a substituent selected from the group consisting of hydrogen, lower alkyl, optionally substituted carbocyclic or heterocyclic ring, halogen, perhaloalkyl, hydroxy, alkoxy, nitro, and amino;

a five-membered or six-membered heteroaryl ring or a six-membered aryl

ring, optionally substituted with one or more substituents selected from the group consisting of optionally substituted C_1-C_8 straight-chain, branched, or cyclic saturated or unsaturated alkyl; an alkoxy; halogen; and perhaloalkyl;

cyano; nitro; an amino; an amido; perhaloalkyl; and halogen;

R_3 is selected from the group consisting of hydrogen; alkyl, optionally substituted with a substituent selected from the group consisting of hydrogen, lower alkyl, optionally substituted carbocyclic or heterocyclic ring; hydroxy; halogen; amino; nitro; and cyano; and

B is a five-membered or six-membered heteroaryl ring, or $-(CH_2)_j$-$C(O)OR_4$, wherein j is 0 ~~or 1~~ when Ar_2 is a bicyclic or tricyclic carbocyclic ring structure and j is 1 when Ar_2 is a monocyclic carbocyclic ring structure; and

R_4 is selected from the group consisting of

hydrogen;

alkyl, optionally substituted with a substituent selected from the group consisting of hydrogen, lower alkyl, optionally substituted carbocyclic or heterocyclic ring;

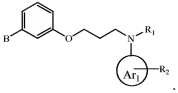
a five-membered or six-membered heteroaryl ring or a six-membered aryl ring, optionally substituted with one or more substituents selected from the group consisting of optionally substituted C_1-C_8 straight-chain, branched, or cyclic saturated or unsaturated alkyl;

or a pharmaceutically acceptable N-oxide, pharmaceutically acceptable prodrug, pharmaceutically active metabolite, pharmaceutically acceptable salt, pharmaceutically acceptable ester, pharmaceutically acceptable amide, or pharmaceutically acceptable solvate thereof.

2. (original) The compound of Claim 1, wherein Ar_2 is selected from the group consisting of phenyl, naphthyl, anthracene, and phenanthrene.

3. (original) The compound of Claim 2, wherein Ar_2 is phenyl.

4. (original) The compound of Claim 3, having the structure:



.

5. (original) The compound of claim 2, wherein Ar_2 is naphthyl.

6. (original) The compound of Claim 4 or Claim 5, wherein R_1 is alkyl, optionally substituted with one or more optionally substituted carbocyclic or heterocyclic rings.

7. (original) The compound of Claim 6, wherein said alkyl is a lower alkyl.

8. (original) The compound of Claim 7, wherein said lower alkyl is selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, tert-butyl, and sec-butyl.

9. (original) The compound of Claim 6, wherein said carbocyclic ring is phenyl.

10. (original) The compound of Claim 9, wherein said phenyl is optionally substituted with one or more substituents selected from the group consisting of lower alkyl, halogen, perhaloalkyl, hydroxy, alkoxy, nitro, and amino.

11. (original) The compound of Claim 10, wherein said substituent is perhaloalkyl.

12. (original) The compound of Claim 11, wherein said perhaloalkyl is trifluoromethyl.

13. (original) The compound of Claim 1, wherein R_1 is alkyl substituted with 4-bis(trifluoromethyl)phenylmethyl.

14. (canceled)

15. (canceled)

16. (canceled)

17. (canceled)

18. (currently amended) The compound of any one of Claim 4 ~~and~~ or Claim 5, wherein R_2 is optionally substituted alkyl.

19. (original) The compound of Claim 18, wherein said alkyl is a lower alkyl.

20. (original) The compound of Claim 19, wherein said lower alkyl is selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, tert-butyl, and sec-butyl.

21. (currenty amended) The compound of ~~any of~~ Claim 20, wherein R_2 is ethyl.

22. (original) The compound of Claim 1, wherein R_3 is hydrogen, halogen or optionally substituted alkyl.

23. (original) The compound of Claim 22, wherein said optionally substituted alkyl is an optionally substituted lower alkyl.

24. (original) The compound of Claim 23, wherein said optionally substituted lower alkyl is selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, tert-butyl, and sec-butyl.

25. (original) The compound of Claim 1, wherein R_3 is methyl.

26. (original) The compound of Claim 1, wherein R_3 is hydrogen.

27. (original) The compound of Claim 1, wherein B and the propyloxy substituents on Ar_2 are ortho to each other.

28. (original) The compound of Claim 1, wherein B and the propyloxy substituents on Ar_2 are meta to each other.

29. (original) The compound of Claim 1, wherein B and the propyloxy substituents on Ar_2 are para to each other.

30. (original) The compound of Claim 1, wherein B is a heteroaryl ring selected from the group consisting of furan, thiophene, pyrrole, pyrroline, pyrrolidine, oxazole, thiazole, imidazole, imidazoline, imidazolidine, pyrazole, pyrazoline, pyrazolidine, isoxazole, isothiazole, triazole, tetrazole, thiadiazole, pyran, pyridine, piperidine, morpholine, thiomorpholine, pyridazine, pyrimidine, pyrazine, piperazine, triazine,  ,  , and  .

31. (original) The compound of Claim 30, wherein B is a tetrazole.

32. (original) The compound of Claim 1, wherein B is $-(CH_2)_j$-$C(O)OR_4$.

33. (original) The compound of Claim 32, wherein R_4 is hydrogen or optionally substituted alkyl.

34. (original) The compound of Claim 33, wherein said alkyl is a lower alkyl.

35. (original) The compound of Claim 34, wherein said lower alkyl is selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, tert-butyl, and sec-butyl.

36. (original) The compound of Claim 33, wherein R_4 is hydrogen.

37. (canceled)

38. (canceled)

39. (canceled)

40. (canceled)

41. (currently amended) The compound of any one of Claim 4 ~~and~~ or Claim 5, wherein B is a heteroaryl ring selected from the group consisting of furan, thiophene, pyrrole, pyrroline, pyrrolidine, oxazole, thiazole, imidazole, imidazoline, imidazolidine, pyrazole, pyrazoline, pyrazolidine, isoxazole, isothiazole, triazole, tetrazole, thiadiazole, pyran, pyridine, piperidine,

morpholine, thiomorpholine, pyridazine, pyrimidine, pyrazine, piperazine, triazine,  ,

 , and  .

42. (original) The compound of Claim 41, wherein B is a tetrazole.

43. (currently amended) The compound of any one of Claim 4 ~~and~~ or Claim 5, wherein B is $-(CH_2)_j-C(O)OR_4$.

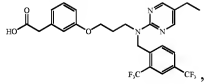
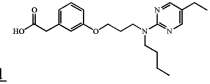
44. (original) The compound of Claim 43, wherein R_4 is hydrogen or optionally substituted alkyl.

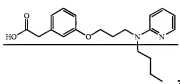
45. (original) The compound of Claim 44, wherein said alkyl is a lower alkyl.

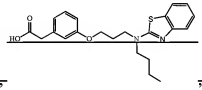
46. (original) The compound of Claim 45, wherein said lower alkyl is selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, tert-butyl, and sec-butyl.

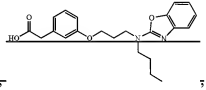
47. (currently amended) The compound of any one of Claim 4 ~~and~~ or Claim 5, wherein R_4 is hydrogen.

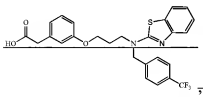
48. (currently amended) The compound of Claim 4 selected from the group consisting of:

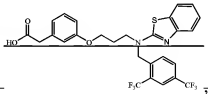
 , and  ,

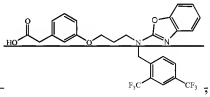
 ;

 ;

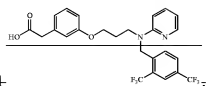
 ;

 ;

 ;

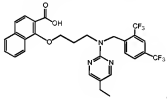
 ;

~~and~~

 ;

or a pharmaceutically acceptable N-oxide, pharmaceutically acceptable prodrug, pharmaceutically active metabolite, pharmaceutically acceptable salt, pharmaceutically acceptable ester, pharmaceutically acceptable amide, or pharmaceutically acceptable solvate thereof.

49. (currently amended) The compound of Claim 5 selected from the group consisting of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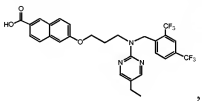
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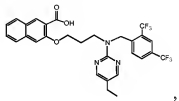
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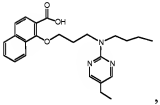
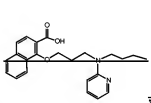
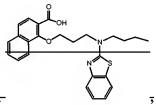
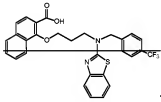
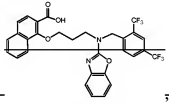
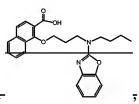
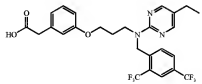



, and ; ;



; ~~, and~~ ;

or a pharmaceutically acceptable N-oxide, pharmaceutically acceptable prodrug, pharmaceutically active metabolite, pharmaceutically acceptable salt, pharmaceutically acceptable ester, pharmaceutically acceptable amide, or pharmaceutically acceptable solvate thereof.

50. (original) A compound having the structure of Formula III:


(III).

51. (original) A method of modulating a peroxisome proliferator-activated receptor (PPAR) function comprising contacting said PPAR with a compound of Claim 1 and monitoring a change in cell phenotype, cell proliferation, activity of said PPAR, or binding of said PPAR with a natural binding partner.

52. (original) The method of Claim 51, wherein said PPAR is selected from the group consisting of PPARα, PPARδ, and PPARγ.

53. (original) A method of inhibiting the formation of adipocytes in a mammal comprising administering a therapeutically effective amount of a compound of Claim 1 to the mammal.

54. (currently amended) ~~The method of Claim 53,~~ A method of inhibiting the formation of adipocytes in a mammal comprising administering a therapeutically effective amount of a compound of Claim 3 to the mammal.

55. (currently amended) ~~The method of Claim 54,~~ A method of inhibiting the formation of adipocytes in a mammal comprising administering a therapeutically effective amount of a compound of Claim 4 to the mammal.

56. (currently amended) ~~The method of Claim 53,~~ A method of inhibiting the formation of adipocytes in a mammal comprising administering a therapeutically effective amount of a compound of Claim 5 to the mammal.

57. (original) A method of inhibiting the formation of adipocytes in a mammal comprising administering a therapeutically effective amount of a compound of Claim 50 to the mammal.

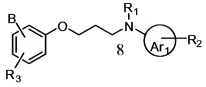
58. (cancelled)

59. (currently amended) ~~The method of Claim 58, wherein the disease is~~ A method of treating a PPAR-modulated disease or condition comprising identifying a patient in need thereof, and administering a therapeutically effective amount of a compound of Claim 1 to the patient.

60. (currently amended) ~~The method of Claim 58, wherein the disease is~~ A method of treating a metabolic disorder or condition comprising identifying a patient in need thereof, and administering a therapeutically effective amount of a compound of Claim 1 to the patient.

61. (currently amended) ~~The method of Claim 58, wherein said~~ A method of treating a disease ~~is~~ selected from the group consisting of obesity, diabetes, hyperinsulinemia, metabolic syndrome X, polycystic ovary syndrome, climacteric, disorders associated with oxidative stress, inflammatory response to tissue injury, pathogenesis of emphysema, ischemia-associated organ injury, doxorubicin-induced cardiac injury, drug-induced hepatotoxicity, atherosclerosis, and hypertoxic lung injury comprising identifying a patient in need thereof, and administering a therapeutically effective amount of a compound of Claim 1 to the patient.

62. (currently amended) The method of any one of Claims ~~59-61~~ 59, 60, or 61, comprising administering a therapeutically effective amount of a compound ~~of claim 3~~ having the structure of Formula II to said ~~mammal~~ patient:



II

wherein

Ar_1 is pyrimidine;

R_1 is selected from the group consisting of

alkyl, optionally substituted with a substituent selected from the group consisting of hydrogen, lower alkyl, optionally substituted carbocyclic or heterocyclic ring, halogen, perhaloalkyl, hydroxy, alkoxy, nitro, and amino;

a five-membered or six-membered heteroaryl ring or a six-membered aryl ring, optionally substituted with one or more substituents selected from the group consisting of optionally substituted C_1-C_8 straight-chain, branched, or cyclic saturated or unsaturated alkyl; an alkoxy; cyano; nitro; an amino; an amido; perhaloalkyl; and halogen;

R_2 is selected from the group consisting of

hydrogen;

alkyl, optionally substituted with a substituent selected from the group consisting of hydrogen, lower alkyl, optionally substituted carbocyclic or heterocyclic ring, halogen, perhaloalkyl, hydroxy, alkoxy, nitro, and amino;

a five-membered or six-membered heteroaryl ring or a six-membered aryl ring, optionally substituted with one or more substituents selected from the group consisting of optionally substituted C_1-C_8 straight-chain, branched, or cyclic saturated or unsaturated alkyl; an alkoxy; halogen; and perhaloalkyl;

cyano; nitro; an amino; an amido; perhaloalkyl; and halogen;

R_3 is selected from the group consisting of hydrogen; alkyl, optionally substituted with a substituent selected from the group consisting of hydrogen, lower alkyl, optionally substituted carbocyclic or heterocyclic ring; hydroxy; halogen; amino; nitro; and cyano; and

B is a five-membered or six-membered heteroaryl ring, or $-CH_2$-$C(O)OR_4$; and

R_4 is selected from the group consisting of

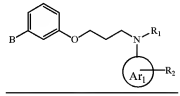
hydrogen;

alkyl, optionally substituted with a substituent selected from the group consisting of hydrogen, lower alkyl, optionally substituted carbocyclic or heterocyclic ring;

a five-membered or six-membered heteroaryl ring or a six-membered aryl ring, optionally substituted with one or more substituents selected from the group consisting of optionally substituted C_1-C_8 straight-chain, branched, or cyclic saturated or unsaturated alkyl;

or a pharmaceutically acceptable N-oxide, pharmaceutically acceptable prodrug, pharmaceutically active metabolite, pharmaceutically acceptable salt, pharmaceutically acceptable ester, pharmaceutically acceptable amide, or pharmaceutically acceptable solvate thereof.

63. (currently amended) The method of any one of Claims ~~59-61~~ 59, 60, or 61, comprising administering a therapeutically effective amount of a compound ~~of claim 4~~ having the structure of Formula III to said ~~mammal~~ patient:



III

wherein

Ar_1 is pyrimidine;

R_1 is selected from the group consisting of

alkyl, optionally substituted with a substituent selected from the group consisting of hydrogen, lower alkyl, optionally substituted carbocyclic or heterocyclic ring, halogen, perhaloalkyl, hydroxy, alkoxy, nitro, and amino;

a five-membered or six-membered heteroaryl ring or a six-membered aryl ring, optionally substituted with one or more substituents selected from the group consisting of optionally substituted C_1-C_8 straight-chain, branched, or cyclic saturated or unsaturated alkyl; an alkoxy; cyano; nitro; an amino; an amido; perhaloalkyl; and halogen;

R_2 is selected from the group consisting of

hydrogen;

alkyl, optionally substituted with a substituent selected from the group consisting of hydrogen, lower alkyl, optionally substituted carbocyclic or heterocyclic ring, halogen, perhaloalkyl, hydroxy, alkoxy, nitro, and amino;

a five-membered or six-membered heteroaryl ring or a six-membered aryl ring, optionally substituted with one or more substituents selected from the group consisting of optionally substituted C_1-C_8 straight-chain, branched, or cyclic saturated or unsaturated alkyl; an alkoxy; halogen; and perhaloalkyl;

cyano; nitro; an amino; an amido; perhaloalkyl; and halogen;

B is a five-membered or six-membered heteroaryl ring, or $-CH_2$-$C(O)OR_4$; and

R_4 is selected from the group consisting of

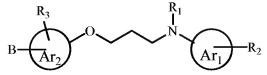
hydrogen;

alkyl, optionally substituted with a substituent selected from the group consisting of hydrogen, lower alkyl, optionally substituted carbocyclic or heterocyclic ring;

a five-membered or six-membered heteroaryl ring or a six-membered aryl ring, optionally substituted with one or more substituents selected from the group consisting of optionally substituted C_1-C_8 straight-chain, branched, or cyclic saturated or unsaturated alkyl;

or a pharmaceutically acceptable N-oxide, pharmaceutically acceptable prodrug, pharmaceutically active metabolite, pharmaceutically acceptable salt, pharmaceutically acceptable ester, pharmaceutically acceptable amide, or pharmaceutically acceptable solvate thereof.

64. (currently amended) The method of any one of Claims ~~59-61~~ 59, 60, or 61, comprising administering a therapeutically effective amount of a compound ~~of claim 5~~ having the structure of Formula IV to said ~~mammal~~ patient:



IV

wherein

Ar_1 is pyrimidine;

Ar_2 is napthyl

R_1 is selected from the group consisting of

alkyl, optionally substituted with a substituent selected from the group consisting of hydrogen, lower alkyl, optionally substituted carbocyclic or heterocyclic ring, halogen, perhaloalkyl, hydroxy, alkoxy, nitro, and amino;

a five-membered or six-membered heteroaryl ring or a six-membered aryl ring, optionally substituted with one or more substituents selected from the group consisting of optionally substituted C_1-C_8 straight-chain, branched, or cyclic saturated or unsaturated alkyl; an alkoxy; cyano; nitro; an amino; an amido; perhaloalkyl; and halogen;

R_2 is selected from the group consisting of

hydrogen;

alkyl, optionally substituted with a substituent selected from the group consisting of hydrogen, lower alkyl, optionally substituted carbocyclic or heterocyclic ring, halogen, perhaloalkyl, hydroxy, alkoxy, nitro, and amino;

a five-membered or six-membered heteroaryl ring or a six-membered aryl ring, optionally substituted with one or more substituents selected from the group consisting of optionally substituted C_1-C_8 straight-chain, branched, or cyclic saturated or unsaturated alkyl; an alkoxy; halogen; and perhaloalkyl;

cyano; nitro; an amino; an amido; perhaloalkyl; and halogen;

R_3 is selected from the group consisting of hydrogen; alkyl, optionally substituted with a substituent selected from the group consisting of hydrogen, lower alkyl, optionally substituted carbocyclic or heterocyclic ring; hydroxy; halogen; amino; nitro; and cyano; and

B is a five-membered or six-membered heteroaryl ring, or $-(CH_2)_j$-$C(O)OR_4$, wherein j is 0 or 1; and

R_4 is selected from the group consisting of

hydrogen;

alkyl, optionally substituted with a substituent selected from the group consisting of hydrogen, lower alkyl, optionally substituted carbocyclic or heterocyclic ring;

a five-membered or six-membered heteroaryl ring or a six-membered aryl ring, optionally substituted with one or more substituents selected from the group consisting of optionally substituted C_1-C_8 straight-chain, branched, or cyclic saturated or unsaturated alkyl;

or a pharmaceutically acceptable N-oxide, pharmaceutically acceptable prodrug, pharmaceutically active metabolite, pharmaceutically acceptable salt, pharmaceutically acceptable ester, pharmaceutically acceptable amide, or pharmaceutically acceptable solvate thereof.

65. (original) A method of treating a PPAR-modulated disease or condition comprising identifying a patient in need thereof, and administering a therapeutically effective amount of the compound of Claim 50 to the patient.

66. (original) A pharmaceutical composition comprising a compound of Claim 1 and a pharmaceutically acceptable diluent, excipient, or carrier.

67. (original) A pharmaceutical composition comprising a compound of Claim 3 and a pharmaceutically acceptable diluent, excipient, or carrier.

68. (original) A pharmaceutical composition comprising a compound of Claim 4 and a pharmaceutically acceptable diluent, excipient, or carrier.

69. (original) A pharmaceutical composition comprising a compound of Claim 5 and a pharmaceutically acceptable diluent, excipient, or carrier.

70. (original) A pharmaceutical composition comprising the compound of Claim 50 and a pharmaceutically acceptable diluent, excipient, or carrier.